

# American Journal of Physiology: Gastrointestinal and Liver Physiology

No. 1. JANUARY 1990

## EDITORIAL REVIEW

Lipid mediators of inflammation in gastric ulcer  
*J. L. Wallace*

G1

Effects of acetylcholine and substance P on electrical activity of intact  
toad gastric muscles

*P. Y. Shonnard and K. M. Sanders*

G12

Calcium uptake by brush-border and basolateral membrane vesicles in chick duodenum

*J. Takito, T. Shinki, T. Sasaki, and T. Suda*

G16

Neural control of duodenal motor inhibition by antral contractions in dogs

*S. N. Reddy and E. E. Daniel*

G24

Jejunal regulation of gastric motility patterns: effect of extrinsic neural  
continuity to stomach

*M. P. Spencer, M. G. Sarr, N. J. Soper, and N. S. Hakim*

G32

Effect of diet on triolein absorption in weanling rats

*C. A. Flores, P. M. Brannon, M. A. Wells, M. Morrill, and O. Koldovsky*

G38

Mechanisms of changes in  $K^+$  balance on reduction and reestablishment of flow  
in isolated rat liver

*L. Sestoft and M. Folke*

G45

Development and tissue distribution of sucrase-isomaltase mRNA in rats

*L. L. Leeper and S. J. Henning*

G52

Role of neuropeptide Y in opossum internal anal sphincter

*S. Nurko and S. Rattan*

G59

Gastric emptying of nondigestible solids in dogs: a hydrodynamic correlation

*P. J. Sirois, G. L. Amidon, J. H. Meyer, J. Doty, and J. B. Dressman*

G65

Hormonal stimulation of  $Ca^{2+}$  release from the perfused liver: effects of uncoupler

*N. Kraus-Friedmann, S. Higham, and C. R. Fleschner*

G73

Role of ornithine decarboxylase in repair of gastric mucosal stress ulcers

*J.-Y. Wang and L. R. Johnson*

G78

Pancreatic receptors for cholecystokinin: evidence for three receptor classes

*D.-H. Yu, S. C. Huang, S. A. Wank, S. Mantey, J. D. Gardner, and R. T. Jensen*

G86

Interaction of cholera toxin with cloned human goblet cells in monolayer culture

*W. I. Lencer, F. D. Reinhart, and M. R. Neutra*

G96

Identification of neurotransmitters by selective protection of postjunctional receptors

*J. R. Grider*

G103

Carbachol desensitizes pancreatic enzyme secretion by downregulation of receptors

*R. Vinayek, M. Murakami, C. M. Sharp, R. T. Jensen, and J. D. Gardner*

G107

Neurokinin inhibition of cholinergic myenteric neurons in canine antrum

*E. A. Mayer, C. B. M. Koelbel, W. J. Snape, Jr., G. VanDeventer, and L. LeDuc*

G122

Altered role of microtubules in asialoglycoprotein trafficking in developing liver

*S. S. Kaufman, P. L. Blain, J. H. Y. Park, and D. J. Tuma*

G129

The propulsive behavior of the opossum sphincter of Oddi

*R. Calabuig, M. G. Ulrich-Baker, F. G. Moody, and W. A. Weems*

G138

Metabolism of enkephalin in stomach wall of rats

*N. W. Bunnett, J. H. Walsh, and H. T. Debas*

G143

Intrahypothalamic corticotropin-releasing factor elevates gastric bicarbonate  
and inhibits stress ulcers in rats

*M. W. Gunion, G. L. Kauffman, Jr., and Y. Taché*

G152

Platelet-activating factor-induced microvascular dysfunction: role of adherent leukocytes <i>P. Kubes, M. Suzuki, and D. N. Granger</i>	G158
Movement of wax particles by contractions in the isolated opossum esophagus <i>J. Ren and K. Schulze-Delrieu</i>	G164

## RAPID COMMUNICATIONS

Absence of synchrony between human small intestinal migrating motor complex and rectal motor complex <i>D. Kumar, P. D. Thompson, and D. L. Wingate</i>	G171
--	------

## No. 2. FEBRUARY 1990

Pharyngeal and upper esophageal sphincter manometry in humans <i>J. A. Castell, C. B. Dalton, and D. O. Castell</i>	G173
Effect of CCK antagonist L 364718 on meal-induced pancreatic secretion in rats <i>M. F. O'Rourke, R. D. Reidelberger, and T. E. Solomon</i>	G179
Role of oxidants in ischemia/reperfusion-induced granulocyte infiltration <i>B. J. Zimmerman, M. B. Grisham, and D. N. Granger</i>	G185
Decreased systemic vascular sensitivity to norepinephrine in portal hypertensive rats: role of hyperglucagonism <i>M. P. Pizcueta, R. Casamitjana, J. Bosch, and J. Rodés</i>	G191
Human pancreatic secretion and intestinal motility: effects of ileal nutrient perfusion <i>P. Layer, S. Peschel, T. Schlesinger, and H. Goebell</i>	G196
Isobaric intestinal distension in humans: sensorial relay and reflex gastric relaxation <i>F. Azpiroz and J.-R. Malagelada</i>	G202
Modulation of feline esophageal contractions by bolus volume and outflow obstruction <i>R. K. Mittal, J. Ren, R. W. McCallum, H. A. Shaffer, Jr., and J. Sluss</i>	G208
Human intestinal water absorption: direct vs. indirect measurements <i>C. V. Gisolfi, R. W. Summers, H. P. Schedl, T. L. Bleiler, and R. A. Oppliger</i>	G216
Effects of tetrodotoxin on chloride secretion in rabbit distal colon: tissue and cellular studies <i>B. Biagi, Y.-Z. Wang, and H. J. Cooke</i>	G223
Effects of PGF <sub>2α</sub> and of indomethacin on rabbit small and large intestinal motility in vivo <i>R. Burakoff, E. Nastos, and S. Won</i>	G231
Villous motility and unstirred water layers in canine intestine <i>D. Mailman, W. A. Womack, P. R. Kvietys, and D. N. Granger</i>	G238
Effects of morphine on colonic myoelectric and motor activity in subhuman primates <i>C. T. Frantzides, R. E. Condon, W. J. Schulte, and V. Cowles</i>	G247
Characterization of the major form of cholecystokinin in human intestine: CCK-58 <i>V. E. Eysselein, G. A. Eberlein, M. Schaeffer, D. Grandt, H. Goebell, W. Niebel, G. L. Rosenquist, H. E. Meyer, and J. R. Reeve, Jr.</i>	G253
Contribution of Cl <sup>-</sup> -OH <sup>-</sup> exchange to electroneutral NaCl absorption in rat distal colon <i>E. S. Foster, P. K. Dudeja, and T. A. Brasitus</i>	G261
An important role of endogenous insulin on exocrine pancreatic secretion in rats <i>K. Y. Lee, L. Zhou, X. S. Ren, T.-M. Chang, and W. Y. Chey</i>	G268
Beneficial effects of two forms of NO administration in feline splanchnic artery occlusion shock <i>N. Aoki, G. Johnson III, and A. M. Lefer</i>	G275
Small intestinal amyogenesis and dysmyogenesis induced by morphine and loperamide <i>S. K. Sarna and M. F. Otterson</i>	G282
Effects of osmotic stresses on isolated rat hepatocytes. I. Ionic mechanisms of cell volume regulation <i>J. G. Corasanti, D. Gleeson, and J. L. Boyer</i>	G290
Effects of osmotic stresses on isolated rat hepatocytes. II. Modulation of intracellular pH <i>D. Gleeson, J. G. Corasanti, and J. L. Boyer</i>	G299

Intestinal ornithine decarboxylase: half-life and regulation by putrescine <i>K. Iwami, J.-Y. Wang, R. Jain, S. McCormack, and L. R. Johnson</i>	G308
CGRP stimulates the release of pro-somatostatin-derived peptides from the gastric fundus <i>N. W. Bunnett, W. S. Helton, H. T. Debas, and J. W. Ensink</i>	G316
Vagal interactions on brain stem neurons receiving input from the proximal stomach in cats <i>W. D. Barber, C.-S. Yuan, and B. J. Cammarata</i>	G320

### No. 3. MARCH 1990

Cold-restraint stress increases rat fecal pellet output and colonic transit <i>F. C. Barone, J. F. Deegan, W. J. Price, P. J. Fowler, J. D. Fondacaro, and H. S. Ormsbee III</i>	G329
Mechanical properties of isolated human esophageal smooth muscle <i>A. Tøttrup, A. Forman, N. Uldbjerg, P. Funch-Jensen, and K.-E. Andersson</i>	G338
Effects of transmural field stimulation in isolated muscle strips from human esophagus <i>A. Tøttrup, A. Forman, P. Funch-Jensen, U. Raundahl, and K.-E. Andersson</i>	G344
Influence of morphine or capsaicin pretreatment on rat gastric microcirculatory response to PAF <i>J. M. Pique, J. V. Esplugues, and B. J. R. Whittle</i>	G352
Somatostatin regulates duodenal cholecystokinin and somatostatin messenger RNA <i>S. Kanayama and R. A. Liddle</i>	G358
Splanchnic and systemic hemodynamics in mice using a radioactive microsphere technique <i>S. K. Sarin, C. Sabba, and R. J. Groszmann</i>	G365
Jejunal adenosine increases during food-induced jejunal hyperemia <i>D. R. Sawmiller and C. C. Chou</i>	G370
Hypertonic fluid absorption from rabbit descending colon in vitro <i>D. Blekman and R. J. Naftalin</i>	G377
Mechanical aspects of rabbit fecal dehydration <i>A. T. McKie, W. Powrie, and R. J. Naftalin</i>	G391
Cholecystokinin downregulates receptors for vasoactive intestinal peptide and secretin in rat pancreatic acini <i>S. Katsushima, H. Adachi, T. Honda, S. Sato, T. Kusui, S. Onishi, E. Aoki, M. Noguchi, and J. Konishi</i>	G395
Regional cholinergic differences between distal and proximal colonic myenteric plexus <i>W. L. Hasler, S. Kurosawa, and C. Owyang</i>	G404
Acute and chronic ethanol on hepatic oxygen ethanol and lactate metabolism in cats <i>C. V. Greenway and W. W. Lautt</i>	G411
Exocrine secretion and processing of pro-xenopsin in rat gastric lumen <i>C. F. Ferris, K. Muraki, and R. E. Carraway</i>	G419
Inhibition of intestinal degradation of somatostatin by rat milk <i>R. K. Rao, O. Koldovsky, and T. P. Davis</i>	G426
Histamine augments colonic secretion in guinea pig distal colon <i>Y.-Z. Wang, H. J. Cooke, H.-C. Su, and R. Fertel</i>	G432
Effect of histamine and 1,4-methylhistamine on gastric vascular resistance in dogs <i>J. G. Wood, G. M. Wicina, and L. Y. Cheung</i>	G440
Postnatal development of colonic electrolyte transport in rabbits <i>E. V. O'Loughlin, D. M. Hunt, and D. Kreutzmann</i>	G447
Multiple pathways for the regulation of ornithine decarboxylase in intestinal epithelial cells <i>D. D. Ginty, M. Marlowe, P. H. Pekala, and E. R. Seidel</i>	G454
Transfer of enalaprilat across rat liver cell membranes is barrier limited <i>A. J. Schwab, F. Barker III, C. A. Goresky, and K. S. Pang</i>	G461
Effects of epidermal growth factor on signal transduction in rabbit parietal cells <i>J. J. Lewis, J. R. Goldenring, V. A. Asher, and I. M. Modlin</i>	G476

Electrical and mechanical interactions between the muscle layers of canine proximal colon <i>P. J. Sabourin, Y. J. Kingma, and K. L. Bowes</i>	G484
Aldosterone and glucocorticoid receptor-specific agonists regulate ion transport in rat proximal colon <i>S. G. Turnamian and H. J. Binder</i>	G492
<b>No. 4. APRIL 1990</b>	
Glutathione disulfide as index of oxidant stress in rat liver during hypoxia <i>H. Jaeschke</i>	G499
Ouabain-sensitive K <sup>+</sup> -ATPase in epithelial cells from guinea pig distal colon <i>T. Watanabe, T. Suzuki, and Y. Suzuki</i>	G506
Regulation of cholecystokinin secretion by food, hormones, and neural pathways in the rat <i>L. D. Lewis and J. A. Williams</i>	G512
Myoelectric activity of small intestine after chemical ablation of myenteric neurons <i>G. E. Holle and W. Forth</i>	G519
An orally active inhibitor of leukotriene synthesis accelerates healing in a rat model of colitis <i>J. L. Wallace and C. M. Keenan</i>	G527
Iron uptake from transferrin and lactoferrin by rat intestinal brush-border membrane vesicles <i>H. Kawakami, S. Dosako, and B. Lönnerdal</i>	G535
Decreased secretion due to a Ca <sup>2+</sup> influx defect in frog peptic cells isolated with EGTA <i>N. Uemura, K. E. J. Dickinson, Y. Horiguchi, H. Matsumoto, and B. I. Hirschowitz</i>	G542
Gastric emptying in rats: role of afferent neurons and cholecystokinin <i>E. R. Forster, T. Green, M. Elliot, A. Bremner, and G. J. Dockray</i>	G552
1,25-Dihydroxyvitamin D <sub>3</sub> -inducible catabolism of vitamin D metabolites in mouse intestine <i>M. Tomon, H. S. Tenenhouse, and G. Jones</i>	G557
Circulating xanthine oxidase: potential mediator of ischemic injury <i>Y. Yokoyama, J. S. Beckman, T. K. Beckman, J. K. Wheat, T. G. Cash, B. A. Freeman, and D. A. Parks</i>	G564
Development of gastric antral smooth muscle contractility in newborn rabbits <i>J. Zitterman and J. P. Ryan</i>	G571
Gastrointestinal luminal polyamines: cellular accumulation and enterohepatic circulation <i>D. L. Osborne and E. R. Seidel</i>	G576
Ileocecal sphincter contraction to colonic distension: a tachykinin-mediated spinal reflex <i>R. D. Rothstein, J. DeRiso, and A. Ouyang</i>	G585
Effect of neurotensin on regional cerebral glucose utilization in cold water-restrained rats <i>L. Xing, J. C. King, R. M. Bryan, and G. L. Kauffman, Jr.</i>	G591
Galanin inhibits gastrin release from isolated rat gastric G-cells <i>W. Schepp, C. Prinz, C. Tatge, R. Håkanson, V. Schusdziarra, and M. Classen</i>	G596
Role of oxygen radicals in ethanol-induced damage to cultured gastric mucosal cells <i>H. Mutoh, H. Hiraishi, S. Ota, K. J. Ivey, A. Terano, and T. Sugimoto</i>	G603
The use of intraluminal strain gauges for recording ambulant small bowel motility <i>R. C. Gill, J. E. Kellow, C. Browning, and D. L. Wingate</i>	G610
Evaluation of patterns of human antral and pyloric motility with an antral wall motion detector <i>D. R. Fone, L. M. A. Akkermans, J. Dent, M. Horowitz, and E. J. van der Schee</i>	G616
Human lower esophageal sphincter pressure response to increased intra-abdominal pressure <i>R. K. Mittal, M. Fisher, R. W. McCallum, D. F. Rochester, J. Dent, and J. Sluss</i>	G624
Effect of histamine on the basolateral K <sup>+</sup> conductance of frog stomach oxyntic cells and surface epithelial cells <i>L. Debellis, S. Curci, and E. Frömter</i>	G631

Medullary raphe: a new site for vagally mediated stimulation of gastric motility in cats

*P. J. Hornby, C. D. Rossiter, R. L. White, W. P. Norman,  
D. H. Kuhn, and R. A. Gillis*

G637

**RAPID COMMUNICATIONS**

A71378: a CCK agonist with high potency and selectivity for CCK-A receptors

*C. W. Lin, M. W. Holladay, D. G. Witte, T. R. Miller, C. A. W. Wolfram,  
B. R. Bianchi, M. J. Bennett, and A. M. Nadzan*

G648

**ANNOUNCEMENTS**

G652

**No. 5. MAY 1990**

Circadian rhythms of biliary protein and lipid excretion in rats

*A. Nakano, P. S. Tietz, and N. F. LaRusso*

G653

Glycylsarcosine transport by epithelial cells isolated from chicken proximal cecum and rectum

*M. L. Calonge, A. Ilundáin, and J. Bolufer*

G660

Regulatory volume increase in mammalian jejunal villus cells is due to bumetanide-sensitive NaKCl<sub>2</sub> cotransport

*R. J. MacLeod and J. R. Hamilton*

G665

Effect of swallowed bolus variables on oral and pharyngeal phases of swallowing

*R. O. Dantas, M. K. Kern, B. T. Massey, W. J. Dodds, P. J. Kahrilas,  
J. G. Brasseur, I. J. Cook, and I. M. Lang*

G675

Internalization of EGF in perfused rat liver is independent of the degree of receptor occupancy

*H. Sato, Y. Sugiyama, Y. Sawada, T. Iga, T. Fuwa, and M. Hanano*

G682

Structural and functional characteristics of muscle from diabetic rodent small intestine

*T. V. Nowak, B. Harrington, J. P. Weisbruch, and J. H. Kalbfleisch*

G690

ATP-dependent efflux of GSSG and GS-conjugate from isolated rat hepatocytes

*R. P. J. Oude Elferink, R. Ottenhoff, W. G. M. Liefing, B. Schoemaker,  
A. K. Groen, and P. L. M. Jansen*

G699

Effect of colchicine on the clearance of ferritin in vivo

*G. A. Ramm, L. W. Powell, and J. W. Halliday*

G707

Comparative analysis of protein content in rat mesenteric tissue, peritoneal fluid, and plasma

*B. J. Barber, T. J. Schultz, and D. L. Randlett*

G714

Coupling of H<sup>+</sup>-K<sup>+</sup>-ATPase activity and glucose oxidation in gastric glands

*J. Fryklund, K. Gedda, D. Scott, G. Sachs, and B. Wallmark*

G719

Isolation and characterization of the canalicular membrane bile acid transport protein of rat liver

*C. J. Sippel, M. Ananthanarayanan, and F. J. Suchy*

G728

Propagation velocities and frequencies of contractions along canine small intestine

*M.-L. Siegle, S. Bühner, M. Schemann, H.-R. Schmid, and H.-J. Ehrlein*

G738

Zinc blocks apical membrane anion exchange in gallbladder epithelium

*D. L. Kitchens, K. Dawson, and L. Reuss*

G745

Distribution of common peptide YY-neuropeptide Y receptor along rat intestinal villus-crypt axis

*T. Voisin, C. Rouyer-Fessard, and M. Laburthe*

G753

Ontogenetic development of nutrient transporters in bullfrog intestine

*E. M. Toloza and J. M. Diamond*

G760

Ontogenetic development of transporter regulation in bullfrog intestine

*E. M. Toloza and J. M. Diamond*

G770

Characterization of mucous cell synthetic functions in a new primary canine gastric mucous cell culture system

*C. R. Boland, E. R. Kraus, J. M. Scheiman, C. Black,  
G. D. Deshmukh, and W. O. Dobbins III*

G774

Effects of inhibition of gastric secretion on antral gastrin and somatostatin gene expression in rats <i>S. V. Wu, A. Giraud, M. Mogard, K. Sumii, and J. H. Walsh</i>	G788
Membrane currents and cholinergic regulation of K <sup>+</sup> current in esophageal smooth muscle cells <i>S. M. Sims, M. B. Vivaudou, C. Hillemeier, P. Biancani, J. V. Walsh, Jr., and J. J. Singer</i>	G794
Molecular characterization of bombesin receptors on rat pancreatic acinar AR42J cells <i>P. Singh, E. Draviam, Y.-S. Guo, and A. Kurosky</i>	G803
Inhibition of the $\alpha$ -amidation of gastrin: effects on gastric acid secretion <i>C. J. Dickinson, L. Marino, and T. Yamada</i>	G810
Influence of Cl <sup>-</sup> on pH <sub>i</sub> in oxynticopeptic cells of in vitro frog gastric mucosa <i>A. Yanaka, K. J. Carter, H.-H. Lee, and W. Silen</i>	G815

## No. 6. JUNE 1990

Base secretion in rat distal colon: ionic requirements <i>G. M. Feldman, J. D. Koethe, and R. L. Stephenson</i>	G825
Regulation of pancreatic duct epithelial growth in vitro <i>T. B. Verme and S. R. Hootman</i>	G833
Bombesin changes excitability of rat brain stem neurons sensitive to gastric distension <i>W. R. Ewart, M. V. Jones, and M.-P. Primi</i>	G841
Chemical degeneration of intestinal nerves <i>C. T. Frantzides, J. C. Garancis, B. T. Dumas, and R. E. Condon</i>	G848
Transit of solids through the human colon: regional quantification in the unprepared bowel <i>M. Proano, M. Camilleri, S. F. Phillips, M. L. Brown, and G. M. Thomforde</i>	G856
Effect of acid-base balance on biliary bicarbonate secretion in the isolated perfused guinea pig liver <i>M. Blot-Chabaud, M. Dumont, M. Corbic, and S. Erlinger</i>	G863
Effect of O <sub>2</sub> availability on intrinsic vascular response to venous pressure elevation in postnatal swine intestine <i>P. T. Nowicki and C. E. Miller</i>	G873
Decrease in rat submandibular acinar cell volume during ACh stimulation <i>T. Nakahari, M. Murakami, H. Yoshida, M. Miyamoto, Y. Sohma, and Y. Imai</i>	G878
H <sub>2</sub> receptors mediate cyclical chloride secretion in guinea pig distal colon <i>Y. Z. Wang and H. J. Cooke</i>	G887
Pathways of slow-wave propagation in proximal colon of cats <i>J. L. Conklin and C. Du</i>	G894
Modulation of posttranslational processing of gastrin precursor in dogs <i>A. Varro, J. Nemeth, J. Bridson, J. Lonovics, and G. J. Dockray</i>	G904
Hypothermia, hepatic oxygen supply-demand, and ischemia-reperfusion injury in pigs <i>K. Nagano, S. Gelman, E. L. Bradley, Jr., and D. Parks</i>	G910
Effects of antral vagotomy in dogs on gastrin and gastric secretion with various stimuli <i>B. I. Hirschowitz and J. Fong</i>	G919
Induction of hepatic metallothionein by intraperitoneal metal injection: an associated inflammatory response <i>J. C. Fleet, K. A. Golemboski, R. R. Dietert, G. K. Andrews, and C. C. McCormick</i>	G926
Regulation of ornithine decarboxylase activity in LoVo cells <i>S. A. McCormack, L. L. Tague, E. J. Cragoe, Jr., and L. R. Johnson</i>	G934
Gastric and duodenal mucosal ornithine decarboxylase and damage after corticosterone <i>J.-Y. Wang and L. R. Johnson</i>	G942
Molecular variants of cholecystokinin after endogenous stimulation in humans: a time study <i>V. E. Eysselein, G. A. Eberlein, W. H. Hesse, M. Schaeffer, D. Grandt, R. Williams, H. Goebell, and J. R. Reeve, Jr.</i>	G951
Gastrointestinal peptides activate Na <sup>+</sup> -H <sup>+</sup> exchanger in AR42J cells by increasing its affinity for intracellular H <sup>+</sup> <i>M.-J. Bastié and J. A. Williams</i>	G958

Inhibition of GSH efflux from rat liver by methionine: effects of GSH synthesis in cells and perfused organ <i>J. C. Fernandez-Checa, T. Maddatu, M. Ookhtens, and N. Kaplowitz</i>	G967
Synthesis and secretion of somatostatin-28 and -14 by fetal rat intestinal cells in culture <i>P. L. Brubaker, D. J. Drucker, and G. R. Greenberg</i>	G974
Functionally distinct muscarinic receptors on gastric somatostatin cells <i>M. L. Schubert and J. Hightower</i>	G982
Role of albumin's copper binding site in copper uptake by mouse hepatocytes <i>H. J. McArdle, S. M. Gross, D. M. Danks, and A. G. Wedd</i>	G988

## LETTERS TO THE EDITOR

Methylene blue as a pharmacological probe of intestinal pacemaker activity <i>L. Thuneberg; K. M. Sanders, E. Burke, and R. J. Stevens</i>	G992
The challenge to the relaxation oscillator model <i>S. K. Sarna; N. Publicover and K. M. Sanders</i>	G994

Subject Index to Volume 21	G997
Author Index to Volume 21	G1005

## CORRIGENDA

Volume 257, November 1989

Volume 20, November 1989

Pages G709-G714: J. R. Grider. "Tachykinins as transmitters of ascending contractile component of the peristaltic reflex." Page G711: Fig. 1 should appear as follows:

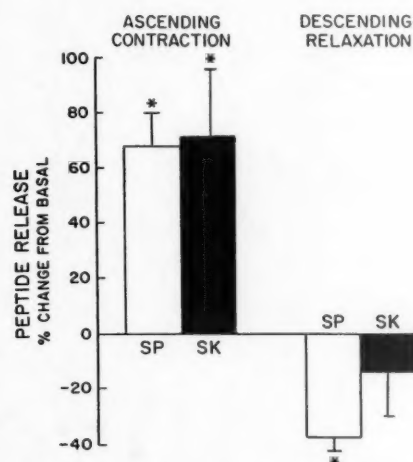


FIG. 1. Release of substance P (SP) and substance K (SK) from isolated rat colonic segments during ascending contraction and descending relaxation. The two components of the peristaltic reflex were elicited separately as outlined in MATERIALS AND METHODS. Data are means  $\pm$  SE of 5-10 experiments. \*  $P < 0.02$ .